

CLAIMS

[1] An oxide coating method characterized by applying a direct current voltage between an anode and a cathode positioned opposite the anode in an electrolyte and formed from a metal plate to be coated with an oxide, and supplying gas into the electrolyte to coat it with the oxide.

[2] An oxide coating method as set forth in claim 1, wherein the gas is oxygen, or a gas containing oxygen.

[3] An oxide coating method as set forth in claim 1 or 2, wherein the gas is supplied through bubble generating means situated below or beside the space between the anode and cathode.

[4] An oxide coating method as set forth in any of claims 1 to 3, wherein the gas is supplied in the form of fine bubbles.

[5] An oxide coating method as set forth in any of claims 1 to 4, wherein the gas is so supplied as to contact the cathode surface.

[6] An oxide coating apparatus characterized by having an anode and a cathode situated opposite the anode in an electrolyte and formed from a metal plate to be coated with an oxide, and bubble generating means for supplying gas into the electrolyte.

[7] An oxide coating apparatus as set forth in claim 6, wherein the anode is an insoluble anode.

[8] An oxide coating apparatus as set forth in claim 6 or

7, wherein the gas is oxygen, or a gas containing oxygen.

[9] An oxide coating apparatus as set forth in any of claims 6 to 8, wherein the bubble generating means is situated below or beside the space between the anode and cathode.

[10] An oxide coating apparatus as set forth in any of claims 6 to 9, wherein the bubble generating means is a porous body connected to a source of gas supply.

[11] An oxide coating apparatus as set forth in claim 10, wherein the porous body has a pore diameter of 1 to 1,000 μm and a void ratio of 5 to 95%.

[12] An oxide coating apparatus as set forth in claim 10 or 11, wherein the porous body is a sintered body of any of a metal powder, a ceramic powder and an organic resin powder.

[13] An oxide coating apparatus as set forth in claim 10 or 11, wherein the porous body is a foamed product of any of a foamed metal, a foamed ceramic and a foamed organic resin having open cells.